

# COMMUNITY COLLABORATION FOR PRODUCT DESIGN (CO-CO DESIGN): AN ACADEMIC ALTERNATIVE FOR SOCIAL INNOVATION

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## ABSTRACT

Playlab, an educational initiative of the School of Architecture, Art and Design of the Tecnologico de Monterrey University, provides a steady academic base for innovation in product co-design adapting to changing social and cultural contexts. Play Lab aims to bring students from different disciplines together to tackle social challenges within a specific local community as a platform for social innovation and moving beyond the classroom into an established social community. The professors deploy a wide arrange of participatory and ethnographic tools from which students choose and implement in the specific community context. Thus, the students have to go through a full and profound social and urban research of the chosen context before deciding on a viable collaboration design. Play Lab has had three iterations with different students in 2016, 2017 and 2018. This paper hopes to compile, compare and explain the processes and results of Play Lab while analysing some variables as a reference. Using a methodology proposed by Hansson et al. (2011) we performed an evaluation of the aforementioned iterations. We believe we have gained clarity regarding future strategies, methods and tools to be further used in Play Lab, our academic alternative for social innovation.

*Keywords: Social innovation, community design, collaborative design, product design*

## 1 INTRODUCTION

In a world characterised by uncertainty and change, the role of the designer must be to rethink from different scenarios that involves collective projects. The Play Lab project presented in this paper is a new approach of the School of Architecture, Art and Design (EAAD) in the Tecnologico de Monterrey, to train 21st century professionals. We have the intention of rethinking the role of a designer within our new educational model, an initiative named Tec 21, which seeks to forge future leaders.

To face the constant changes of the landscape in design education and engineering, the EAAD developed a pilot project named Play Lab, an education model which consolidates one full time semester into a real-world learning experience, providing a steady academic base for innovation in co-design and constant adaptation to changing social and cultural contexts. Play Lab, allows students from different disciplines to come together to tackle social challenges of a specific local community as a platform for social innovation, experimentation and learning. Play lab works in a predefined social community while the professors provide ethnographic and participatory tools for students to choose from and implement into real-life contexts. The students are priorly required to be deeply involved in a social and urban research with that specific community before moving on to collaborative designs.

### 1.1 Participatory Design Methods, Evolution and Biases

The role of the designer extends facing challenges of organisational design, services, strategies, interactions and social innovation. With the use of ethnographic tools and looking for a closer relationship with the community, the designer has a fundamental role in collaborative and interdisciplinary teams [21]. The motivation is often much less about designing objects and more about

"infrastructure" or enabling careful assemblages and alternative pathways from connection and participation [7].

In Play Lab, in conjunction with the ethnographic information, students applied participatory design methods beginning with activities that helped the community members develop a vision for their development. Participatory methods were used in all phases of the process through workshops, as a tool for inclusion and expansion of collective power [12], of support for governance [5], for the generation of social change, as opposed to the centralised production top-down [3], generating more responsible results, from conversation [13] and the most direct relationship between designer, technical knowledge, and user practical knowledge [20], [18].

Participatory methodologies demonstrate the need for recognition of difference, multiplicity and diversity among decision-making power agents, from relationships of solidarity and trust [3]. It evolves to the concept of "conflictual" participation, where a political agreement can be reached, maintaining the disagreement regarding its interpretations [15]. Here, participatory design is understood as an answer, as a practice of social mobilisation and response that generates new meanings within the social production of spatial imaginaries [8].

Acquiring experience in the local context shows that institutional participation simplifies and distorts decision processes and opportunities. The interventions on the city, therefore, are not made from a level of depth and adequate discussion between the different actors involved. The Play Lab team understands that social change and innovation happen at the root of the problems of the context where we work; that public and collective interventions imply conflicts and that a pluralist democratic society needs consensus. The conflict can be healthy and can be legitimised [1]. Play Lab seeks to rethink the dimension of conflict and antagonism, overcoming that simplified participatory design that offers order and agreements through assent.

Legitimising the conflict involves transforming the idea of the enemy into that of the adversary and resigning the antagonist character at the centre of the democratic discussion [16], and, in the case of the Play Lab, processes of innovation and social change generate a place for social relationships, confrontation and conflict between adversaries does not have to be destroyed but be persuaded or dissuaded. Play Lab proposes an intervention model where the process and the proposal do not nullify conflict but rather absorb it and legitimise it, seeking further depth in the process while using ethnographic tools that allow the understanding of peoples' stories, their motivations, desires and frustrations, to integrate them into the process beyond the product or project.

Contrary to simplified participatory processes, which seek to validate previously determined projects, Play Lab delves into the diagnosis, deepens with the application of ethnographic tools and design focused on the person to discover the real and particular needs. It allows the immersion of the student in a particular local reality [6], in the daily activities of the community, in events and festivities to understanding how people operate [14] from a reflective and empathetic posture [19].

Play Lab embodies ethnographic research from its complexity, as a strategy that complements other types of research [4] and participatory methodologies. In particular, it uses a micro-ethnography dynamic: the strategy is to focus on a particular aspect in a short period of time [4], to place the social problem in a spatial dimension, while analysing the territory, discovering particular problems of the local, within a global pattern, through immersion in the reality studied [10], visualising an added value from the preferences and motivations of people [17], [21]. The ethnographic tools become a project themselves, as the community becomes conscious and problems are made visible, political issues become a provocation and the conflict is assumed. The research itself motivates the discussion, generates the co-design. The implementation and in turn it becomes spaces that understand the antagonistic interests.

Design, from its speculative and critical nature, is a tool to use from an agonistic pluralism and social innovation to generate profound social changes while encouraging a discussion, rather than being a result of discussion. The aforementioned accentuates the designer's role as an artist or activist of a cause [11]. The results of Play Lab are more concerned on the process and the tactics than on the end result, assuming the provocation. However, to implement it, Play Lab poses three challenges: discovering a truth, generating a diagnosis; developing alternatives with the community, implementing ideas backed by a short, medium and long-term master plan.

This paper aims to compile, compare and explain the processes and results of Play Lab while analysing some variables. Using a methodology proposed by Hansson et al. (2011), we performed an evaluation of the aforementioned iterations. We believe we have gained clarity regarding future

strategies, methods and tools to be further used in Play Lab, our academic alternative for social innovation.

## 2 COMPARATIVE EXPERIENCE ANALYSIS

First, we comparatively analysed the three iterations based on variables affecting the result in order to achieve a final descriptive process.

Secondly, we did an evaluation of the aforementioned iterations according to Hansson et al. (2011) methodology as a reference framework, where the design idea is observed as a result of a provocation taking in consideration and analysing different typologies of participation in participatory design process (Figure 1). Design as provocation is seen as means to create awareness of political issues and as part of social processes [2]. We believe it is also a form to question social and political norms, where values and culture offer a possibility to re-think, re-interpret and re-signify challenges [9].

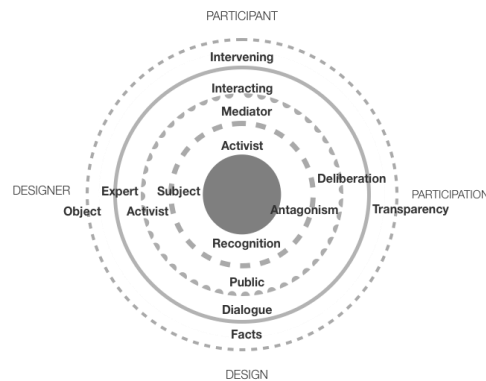


Figure 1. A typology of participation in participatory design [11]

The articulation of the participatory elements and its comparison was analysed (Figure 2). Under this comparative experience analysis, the role of the designers is identified as a mediator of a creation process leading to political action that provokes and accommodates conflict from within. The discussion of different interests deals with controversy management while the project is being developed. During the execution of the project students manage to deal with controversy and flexibility allowing for co-existence of differences in order to reach an appropriate co-created collaborative design.

After analysing all three experiences and looking at the articulation of the participatory elements it is visualised facts to allow transparency, reflexive practice to support dialogue, and expression within the public sphere to legitimise diversity [11] (Figure 2).

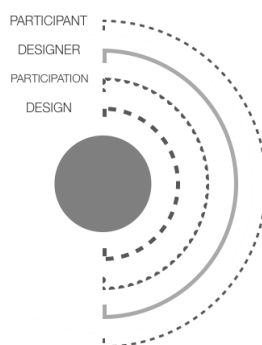


Figure 2. Articulation of the participatory elements

## 3 RESULTS AND DISCUSSION

### 3.1 Comparative analysis and final descriptive process.

In the first iteration of Play Lab (“semester i” i for innovation under the Tec 21st model) the students

collective named *Barrio Chulo* (2016) worked within a low economic urban area. Most of the inhabitants live behind fences and locks for safety reasons reflect the perception of insecurity. Using the right tools, according to a deep appropriate analysis based on ethnographic data, it was clear that to gather people was a problem in itself and a problem for the project as it makes it harder to allow active participation. Since it was a public space, the community was able to intervene and communicate through a tangible, visible and collective dashboard which had a highly efficient result. This technique did not generate conflict or consensus amongst the neighbours of different clusters (gated communities within the same area) but it allowed for respect of diversity. Neighbours and ourselves found that they were able to organise from within using common spaces already available in the residential area.

The second iteration, a project named “Labour” (2017) worked on a rural context where impoverished indigenous communities of the highest levels in our country lived in. In this situation, the participation process was to identify the potential of the communities in order to use them as an ancient knowledge exchange. The areas included gastronomy, art craft and furniture design with indigenous techniques using all natural and local resources. Each household involved had different interest affecting the collective thus a participation network was established. The design was done “with them” rather than “for them” having an important effect on people use to see governmental interventions done “for them”. Such activities created an awareness and empowering effect.

“Encuentro Menchaca” the name of the last and third project, in 2018, was executed in an impoverished community in an urban area of our hometown, Querétaro. Menchaca is a community stigmatised by delinquency and poverty. In this iteration the students identified influencers within the community through a non-structured open call. Due to the delinquency and untrusting neighbours the students decided to approach children developing their design skills while finding their own possibilities of community intervention through modification of their own public spaces. In this project students created children-based method of intervention through games and play. The result was the design of inclusive resilient spaces where delinquent activities such as graffiti or robbery of public goods were accepted and worked with in order to open to us other creation possibilities. This was a successful interaction based on a flexible intervention from which the community self-learned.

### 3.2 Articulation of the participatory element's analysis.

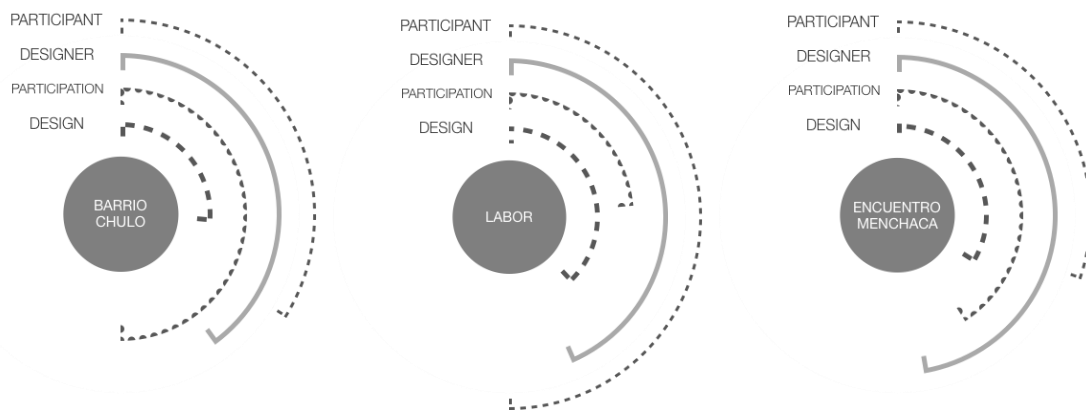


Figure 3. Articulation of the participatory elements of the three Play Lab iterations

*Barrio Chulo* (2016) emphasises the degree of participation of people despite the difficulty to bring them together in one single collaborative process in the face of the lack of interest of the inhabitants that did not only lack resources but also time and had a perception of delinquency and lack of trust to their own neighbours (Figure 3). This project was supported by Fundación Hogares, a private assistance non-profit that promotes social commitment and participation to create collaborative communities that can solve their own needs and improve their own community. Fundación Hogares was fundamental since they had previously worked with this community and we were accompanied by them. Due to that, the neighbourhood groups became involved in their respective clusters, establishing an internal dynamic that impelled others to manage together the clean-up and collaborative design of some public spaces. The strong antagonism among inhabitants of different clusters was compensated with the existing agreement from within the residential clusters. The Play Lab process valued these pre-existing relationships which allowed the process of deliberation among neighbours to be exercised

internally to the housing units while agreements were built the diversity was accepted amongst them. For its part, the path of the *Labour* group (2017) was to find, among the indigenous population, possible participants in the project and to recognise them as users considering that by changing their perception of themselves, the general dynamics and relationships between people and the appreciation of being indigenous with its cultural wealth and identity (Figure 3). *Labour* sought to invert the colonialist welfare and tax vision to become a laboratory of observation, exchange of knowledge, mutual listening and appreciation. Mainly appreciation of the cultural wealth of the Otomi culture and people. This is how the experience becomes a discourse and position in itself that is recognised as activism, it expands to a political realm to make visible and denounce the oblivion and ignorance of the rich culture of the indigenous peoples.

*Encuentro Menchaca* (2018) was an experience that stands out for its work dynamics. Here the role of the designer is that of an agent of the intervention and motor of the interaction when it articulates the processes of creation, mediator and activism (Figure 3). The constant presence in the field and openness allowed students to discover the creative force intrinsically present in the groups of children who frequent specific public spaces before the intervention. We observed the spontaneous use of space by the presence of children with their innocent forms of social interaction and appropriation dynamics. All of the above was key to generating the idea of a playful and didactic tool to be developed and implemented. The concept of play means to “learn while playing,” while at the same time creating objects to occupy public spaces and ignite interaction and community collaboration from below, from the little ones.

In all cases, design is a strategy to generate opportunities of participation, integration and differentiation. During the diagnosis processes through ethnographic tools and territorial analysis, the protagonists use to dialogue and confront conflict on a staged space. The diversity of each place and each group was assumed, the observed facts are described as contributing to transparency, the foundations laid for action and intervention. During the design and prototyping on field, the expertise of the participants, both laymen and designers, is fundamental. Both became activists involved in the transformation of the conception of the public, understood as physical and social condition.

#### **4 CONCLUSIONS**

The comparative methodology used to analyse the three interventions plus the articulation of the actors, their actions and the elements of participation to assess the level of intervention, as well as how - despite the fact that the Play Lab methodology is the same - it allows flexibility for any context. It is adapted but not only to what the designer pre-determines, it requires the input of the community which emphasises collaboration as a means of appropriation. This analysis also allows us to understand key elements for the success of the project, and they seem to go beyond a funding partner or the interdisciplinary nature of the project. It supports the fact that it is based in understanding and attitudinal behaviours by all parts involved.

A challenge faced by Play Lab -along with most university projects, is it that is temporal. By that we mean, are a project with a beginning and an end, a very short end when working into real social contexts. We are sure the students got the learning intended, but the pull out of a community which has accepted you, is never easy for the community, We can even argue that most political parties up to now go to people to get something out of them and when we also try to intervene many of the people in the communities do not believe or want to be involved, or believe and get disappointed by our sudden disappearance in the style of any other politician.

A fundamental aim for our Design and Architecture Department is to keep incentivising action-research as we believe is the principle of good design. There is nothing more challenging to the students that placing them in to a context where it is impossible to work without an immersive research and accurate comprehension of the user and the context in order to move on to idea generation. And there is no more challenging context to understand than the social context while the project backs up democracy and empathy.

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